

REMARKS

Reconsideration of the patentability of the claims of the above reference patent application is solicited in view of the above amendments and the following comments.

This invention is directed to a molded extrudate in the form of a plural (especially two) walled hollow pipe or tubing. The pipe length is made up of at least one inner tube, at least one outer tube radially spaced from the inner tube and a plurality of at least partially spaced apart rib elements disposed in supporting relationship to both the inner and outer tubes. The inner surface of the inner tube is smooth with no undulations. Support for the fact that the inner surface of the inner tube has no undulations can be found by reference to Figures 1, 4a, 4b and 5 of the instant specification. The pipe length(s) claimed herein has at least one end section in which the three elements: the inner tube, the outer tube, and the interconnected ribs are compressed together to convert at least a portion of that end section into a single wall. The single wall portion can have a common inner surface that is consistent with the inner surface of the remainder of the tubular extrudate and an outer surface that has a lesser diameter than the outside diameter of the remainder of the tubular extrudate. This end portion can therefore be considered to be the male end of the pipe length. Alternatively/additionally, the single wall portion can have been made by outwardly compressing and consolidating the inner tub, the outer tube and the enclosed rib members to form a single wall portion that has a common outer surface that is consistent with the outer surface of the remainder of the tubular extrudate and an inner surface that has a larger inside diameter than the remainder of the tubular extrudate. This end portion can therefore be considered to be the female end of the pipe. It is considered to be well within the scope of the instant invention for a single pipe length to have two male ends, two female ends of one male and one female end.

The instant claims are directed to the substantially rigid, molded pipe product that can be produced by extrusion of a moldable plastic coupled with further molding of at least one end portion of a length of pipe to convert the plural walled structure to a single walled consolidated structure. The examiner has complained that the claimed product cannot be defined by the

method of making it such that the claimed product is distinct from the state of the prior art. That is not the law.

It is well established that a product can be claimed as a function of the method of making that product if the method contributes to the uniqueness of the product. In the instant case, the fact that the claimed product is a substantially rigid solid and that it has preferably been made by an extrusion process, is a key element in defining the product. The fact that the claimed product is a substantially rigid solid that has been made by extrusion is one important way of distinguishing the claimed product from the product disclosed in the Hall reference. Note should be taken that the product of the Hall reference cannot be made by an extrusion process. Note should further be taken that the Hall product necessarily is seamed (see element 114 in Figure 4 of the reference).

The first substantive rejection being made in the outstanding action is to the effect that the Hall patent discloses exactly what is being claimed in this application. That rejection is respectfully traversed. It is pointed out below that at least one material feature of every one of applicant's claim is missing from the disclosure of the Hall patent. Therefore a rejection based upon anticipation is incorrect.

In figure 4 of the Hall patent, it appears that the tubular product is formed by first laying out a sheet and applying two respective sets of undulations to two thirds of the sheet. The two sets of undulations are disposed normal to each other, while a third area of the sheet is substantially flat. The sheet is then rolled up (see the upper left area of Figure 4) so that one edge of the sheet having axial undulations is rolled upon itself to form a tube having an undulating inner surface and then rolled further upon itself to form a second layer of the tube that has circumferential undulations (element 112), and then still further rolled upon itself to form the flat, non-undulated outer surface of the thus formed pipe. The sheet material must be attached to itself after being rolled in order to maintain its tubular form. Thus, the instant claims that all call for the claimed product to be seamless are not, and cannot be, anticipated by the Hall reference. The Hall product necessarily has at least one seam where the rolled sheet is attached to itself.

Note too that the instant claims require the inner surface of the inner tubular member that makes up the claimed product to be smooth, that is non-undulating. By contrast, the Hall product regardless of how made has an undulating inner surface.

Further, many of applicant's claims call for the claimed product to be substantially rigid. The Hall product cannot, but its very nature, be substantially rigid. It is made by rolling a sheet of material. The material being rolled therefore must be at least sufficiently flexible to be rolled and must be a material that is capable of being seamed to itself. Both of these requirements are outside the clear scope of the instant claims and clearly contrary to the product that has been described in the instant specification.

It should be noted that some of applicant's claims define the claimed product as having been made by an extrusion process as a seamless whole. The extrusion produces a longitudinally extending pipe that is seamless as extruded. It should be clear to anyone that the product disclosed in the Hall patent cannot be made by extrusion and it cannot be seamless. The Hall product requires two sets of undulations that are radially spaced from each other and are oriented at right angles to each other. While an extrudate can be made having longitudinal undulations, it cannot make undulating elements that are circumferential in orientation.

Further, it should be noted that the Hall tubular product as disclosed in Figure 4 is composed of a spiral of material; the preformed flat sheet is rolled upon itself which necessarily forms the sheet into a spiral the end of which is then joined to the remainder of the spiral. Although the Hall patent is silent on this point, it should be obvious that the rolled sheet material must be joined to itself at two (2) points (along two lines). Consider figure 4 of the Hall reference. The end of the sheet portion 114 is rolled upon itself as shown at "a". When the edge of the sheet portion 114 meets the beginning of the sheet portion 112, it must be joined to itself in order to stabilize it against unraveling or being further compressed as the sheet rolling continues. Then after the sheet portion 112 has been rolled up and the rolling continues to roll up the non-undulating portion 110, the edge of the sheet portion 110 must be joined to itself in order to prevent the sheet from unraveling. None of these rolling and joining actions and elements are present in applicant's substantially rigid, seamless tubular extrudate.

Reference is made to the first column of the Hall patent. At lines 36 et seq. it is disclosed that the Hall product is made by pre-producing three (3) tubes that are adapted to be arranged concentrically. The outer tube is smooth (no undulations); the middle tube has circumferential undulations and the inner tube has longitudinal undulations. When assembled, the ends of the three concentric tubes are flattened together. Thus, under this disclosure, the Hall product is not a single seamless structure and is required by the instant claims.

The second substantive ground of rejection is based on the assertion that the cited Line patent anticipates claims 9-13, 65-67 and 69. The line patent was cited in support of a portion of the first office action issued in this application. In that office action, the examiner rejected the patentability of claims 14 and 15 as being directed to subject matter that would have been obvious to a person of ordinary skill in this art in consideration of the disclosure of the Line patent. That rejection is being carried over in the instant office action. However, in addition to carrying over the rejection of claims 14 and 15 on obviousness grounds, additional claims, including claims that were present when the first action was issued (9-13), are now being rejected over the disclosure of the Line patent on anticipation grounds. In effect, at least this portion of the instant rejection based on the disclosure of the cited Line patent is a first time rejection. First time rejections should not be made final and the applicant thereby denied the right to respond substantively.

The Line patent discloses a heated air conduit that is composed of four (4) elements: A is an internal lining tin sheet and B is a corrugated asbestos sheet having the usual three elements that are present in any corrugated sheet material (that is two outer flat sheets and an undulating sheet sandwiched between them). This, the product described in the Line patent is not seamless, nor is it a single mass of extrudate material. Here, as in the Hall patent, crimping together of the assembled sheet ends are required to form the seams that hold the disparate elements of the conduit together. Note in Figure 2 that the internal tin sheet is folded over the corrugated asbestos material and crimped to clamp the tin and asbestos materials together. There is no such structure disclosed or claimed in the instant application because no such structure is required to product applicant's product.

Further, it should be noted that the product disclosed in the Line patent is not substantially rigid. It is a conduit for warm air having large flat sides that are certainly not substantially rigid. In addition, the Line conduit is not a pipe in any normal sense of the word, certainly not in the sense that the instant applicant and Hall use the word pipe.

Note should be taken of the fact that the internal sheet 2 of the corrugated asbestos layer has undulations that are perpendicular to the direction of flow of whatever is being carried by the Line conduit. This is not a readily producible extrudate. As noted above, applicant's product is a single, seamless mass. Line's is not. Applicant's product is preferably made by an extrusion process which cannot readily be used to make the Line product. Therefore, it should be clear that applicant's claims define a patentable invention in relation to the disclosure of the Line patent.

The last substantive ground of rejection asserted by the examiner in the instant office action is a rejection of claims 2, 3, 64 and 68 as being obvious in view of the combination of the Hall and Herrington patents. The examiner's combination of these references is not understood. The examiner appears to be using the Herrington patent for its disclosure of helical rib members and is apparently asserting that substituting helical rib members for the axial and circumferential rib members of the Hall patent would have been obvious to a person of ordinary skill in this art. The examiner's position may or may not be correct but it does not address the issue of patentability of the instant product. As noted above, by any interpretation of the Hall patent, its product is not a single seamless extrudate. It is at most a spiral wound flexible tubing that is seamed at least at one end and more likely seamed at both ends. More likely, it is a plurality of concentric tubes that are clamped together, not simultaneously extruded into a single product. Therefore, whether the undulations disclosed by Hall are composed of two sets of normally disposed undulations or one set of helically disposed undulations, the disclosed product is still distinctly different from the product claimed herein.

In the first column of the Hall patent, the product is disclosed as being made up of three (3) concentric tubes that are joined together by crimping their longitudinal edges. The instant product is a single tube that is not crimped or seamed in any way. The directions of undulating

elements of the Hall patent have no bearing on the patentability of the instant claims. The instant product could be made with helical rib elements or longitudinal rib elements without in any way impinging on the disclosure of the Hall patent. The fundamental configuration of the instant claimed product is so distinctly different from that of the Hall patent that no comparison can realistically be made. Further, it is pointed out that in its preferred embodiment, the entirety of the instant claimed product, not just the ribs, has a helical orientation. There is nothing in the Hall or Line references that addresses that preferred structure.

In the outstanding office action, the examiner has objected to the instant Abstract/specification in three (3) places. The instant amendments to the Abstract/specification should obviate the examiner's objections. Note that the instant amendments to the Abstract and to the specification are exactly what the examiner requested. If further discussion of this issue is required, the examiner is encouraged to telephone the undersigned attorney.

The amendments to the claims that have been requested by the examiner have been considered. As will be apparent from the above amendments, many of the changes requested by the examiner have been introduced. However, some of the amendments requested by the examiner have not been implemented as they would result in either incorrectly defining the invention or are inconsistent with other portions of the instant claims. It is requested that the examiner reconsider the language of the claims as now amended. Should the examiner believe that additional changes are required, he is urged to telephone the undersigned attorney to discuss what further changes are being suggested.

It is noted that the examiner has taken specific objection to claim 65 in that it characterizes the claimed article as a monolith. In support of his objection to this claim, the examiner has introduced several definitions of the adjective "monolith" and has suggested that it is unclear how this term defines the instant claimed article. In the context of this invention, the term "monolith" is being used to denote that the claimed article is a single structure as made rather than a structure that has been assembled out of a plurality of individual components. In this invention, the claimed article is a complete whole as made without any seams or attachments. The term "monolith" is being used in the instant claims in order to differentiate the

claimed article from one in which the structure is assembled from a plurality of parts or a structure, such as in the Hall patent as further discussed below, in which the assembly requires one or more seam(s) to reach its final configuration. Thus, the instant article is made by extrusion or compression molding or the like. This unitary, seamless molded extrudate product is then further molded to complete its structure by configuring the end portions into male and female shapes as aforesaid. No further assembly of any added parts is required or desired. Within this context, it is acknowledged that some of applicant's claims employ a gasket material between the male and female end portions of successive pipe lengths.

Applicant is entitled to be his own lexicographer. Therefore, if he chooses to refer to this seamless extrudate structure as a monolith, the examiner has no grounds to complain. However, in order to expedite the prosecution of this application, applicant has removed the term "monolith" from the claims.

On page 5 of the outstanding action, the examiner has rejected claims 65, 67 and 68 as containing prohibited new matter. It is clear from a consideration of this entire specification that the article that is being made and is described in the instant claims is a single molding. It is complete as molded and has no later added attachments, nor is it preformed and then self attached as may be the final product of the Hall patent. Although the words "seamless", "unitary structure" and "monolith" do not appear in the instant specification as originally filed, the disclosure of this application is clearly always addressing and describing such a structure. Note that nowhere in this specification is there ever any mention of any sort of attachment to a pipe length except to another pipe length. The absence of any attachment means in the description of the claimed single pipe length (except of course to another single pipe length) is sufficient support for claiming that no such attachment exists.

The addition of words to a filed patent application is prohibited if the words go beyond the context of the filed application. There is no prohibition against adding any matter to a filed patent application, even if that matter does not find *express verbis* support in the application as filed. There is only a prohibition against adding the new words that go beyond the scope of the invention defined and described in the original application. For example, if the applicant defined

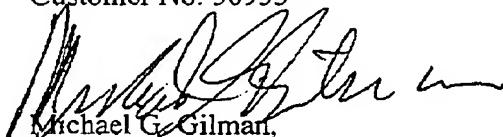
and described a pipe in the original application, he would be prohibited from adding a description of a lock to the application after filing but he would not necessarily be prohibited from adding any words.

That is not what is the situation here. In this application, the initial molded article has been described in the specification as filed as having been made according to the description in US patent 6,405,974 or US patent 3,379,221. This prior art article is a seamless, unitary, monolithic structure. According to this invention, this prior art article is then subjected to post formation further molding to form the instant claimed article, still with no seaming or addition of additional parts. Adding any or all of the words: seamless, unitary or monolith to the description of the instant claimed article does not enlarge the scope of the original description but merely clarifies the structure of the claimed article.

It is therefore urged that this ground of rejection be withdrawn.

Respectfully submitted:

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